

### **Claims:**

1. Rapid input device, comprising at least one input means (10), at least one input acquisition unit (20) and a computer (30), characterized in that at least one input means (10) by virtue of its position in terms of space defines at least one point (P), whose coordinates are converted into electrical signals in at least one input acquisition unit (20) and, over the passage of time, form at least one data quantity (M) from the points (P) and thus [form] the input, that at least one input acquisition unit (20) is connected (25) with the computer (30) and that means are provided in the computer for data processing of at least one data quantity (M).
2. Rapid input device according to Claim 1, characterized in that the connection (25) of the input acquisition unit (20) to computer (30) is accomplished in a wireless manner or via a cable.
3. Rapid input device according to Claim 1 or 2, characterized in that input elements are provided for input in eight directions, whereby the input elements are located in one stroke level.
4. Rapid input device according to Claim 3, characterized in that gradual input elements are provided perpendicularly to the stroke level.
5. Rapid input device according to one of Claims 1 to 4, characterized in that the input is provided in a gradual manner as a function of a stroke length.
6. Rapid input device according to Claim 3, characterized in that input elements are provided in eight directions, whereby one of the eight directions is associated with each vowel.
7. Rapid input device according to Claim 3, characterized in that input elements are provided in eight directions, whereby one of the eight directions is associated with up to eight selected consonants.
8. Rapid input device according to Claim 3, characterized in that input elements are provided in eight directions, whereby one of the eight directions is associated with a blank tap.

9. Rapid input device according to Claim 3, characterized in that an unlimited combination of input elements are provided in eight directions for rapid input.

10. Rapid input device according to Claim 3, characterized in that input elements are provided in eight directions and their combinations, whereby functions of a computer are associated with each of these eight directions or their combinations.

11. Rapid input device according to one of Claims 1, 2, 4 or 5, characterized in that input elements are provided in at least nine directions and their combinations, whereby functions of a computer are associated with each of these nine directions or their combinations.

12. Rapid input device according to Claim 1 or 2, characterized in that input elements are provided in an X/Y field of the input surface (22) of the input acquisition unit (20) for execution, whereby X/Y coordinates – to each of which a function is associated – correspond to the execution position.

13. Rapid input device according to Claim 10 or 11, characterized in that the functions are the dimensioning and shifting of menu windows and the zooming and scrolling in menu windows.

14. Rapid input device according to Claim 10, characterized in that the functions involve the canceling and restoration of inputs.

15. Rapid input device according to Claim 10, characterized in that the functions for screen adjustments are as follows: BRIGHTER, DARKER, REDDER, GREENER, BLUER.

16. Rapid input device according to Claim 10, characterized in that the functions are: COPY, PASTE, CUT, CLEAR, CURSOR UP, CURSOR DOWN, CURSOR LEFT, CURSOR RIGHT, CONTROL, ALT, ALT GR, FUNCTION, OPTION, ESCAPE, OPEN, CLOSE, SHIFT, RETURN, DELETE, F1 to F12; for windows: MINIMIZING, MAXIMIZING, RESTORING, CLOSING and for dialog windows: YES, NO, ABORT, CHANGE.

17. Rapid input device according to Claim 10 or 16, characterized in that the functions are first executed ready [complete] when they are closed with a blank tap.

18. Rapid input device according to Claim 10, characterized in that the functions in a player and recorder unit involve: PLAY, PAUSE, STOP, RECORD, FORWARD, BACKWARD, NEXT TRACK, PREVIOUS TRACK, FIRST TRACK, LAST TRACK and VOLUME.

19. Rapid input device according to Claim 10 or 11, characterized in that the functions involve PAGE UP, PAGE DOWN, HOME, END, INSERT, SHIFT, BACKSPACE, RETURN, DELETE; flush left, flush right, centered, grouped style, tabulator.

20. Rapid input device according to Claim 10 or 11, characterized in that the functions for color parts are as follows: black, white, transparent, red/magenta, blue/cyano, yellow/yellow; for object: line, solidity, text; rotating around each axis, nearer, farther; and for lines: type, thick, thin, normal, thicker, thinner.

21. Rapid input device according to Claim 10 or 11, characterized in that the functions are the attributes of a sound data file and that the functions are provided for their processing.

22. Rapid input device according to Claim 10 or 11, characterized in that the functions are provided for the match-up of data files for the purpose of processing attributes.

23. Rapid input device according to one of Claims 1-22, characterized in that the input can be influenced by muscular movements.

24. Rapid input device according to one of Claims 1-23, characterized in that at least one point (P) has coordinates (x, y, z, t).

25. Rapid input device according to one of Claims 1-24, characterized in that the input means (10) is at least an object, preferably at least a stylus whose tip defines at least one point P(x, y, z, t).

26. Rapid input device according to one of Claims 1-25, characterized in that the input means (10) is at least a finger that defines at least one point P(x, y, z, t).

27. Rapid input device according to one of Claims 1-25, characterized in that the input means (10) is at least a finger or a set of fingers and an object, preferably a stylus, whose tip defines the point  $P(x, y, z, t)$ .

28. Rapid input device according to one of Claims 1-27, characterized in that the input means (10) are the fingers of a hand, a nose or a toe, which define at least one point  $P(x, y, z, t)$ .

29. Rapid input device according to one of Claims 1-28, characterized in that the input means (10) is a finger provided with a thimble, whereby the tip of the thimble defines the point  $P(x, y, z, t)$ .

30. Rapid input device according to one of Claims 1-29, characterized in that the input means (10) is an object, preferably a stylus, and a connecting part (40), whereby the latter is connected mechanically with the input acquisition unit (20) and defines the point  $P(x, y, z, t)$ .

31. Rapid input device according to Claim 30, characterized in that the input acquisition unit (20) has at least two lever arms (41, 41'), which are movably connected with each other by at least two joints (43, 44) containing a total of at least three protractors, whereby one of them is housed in a platform (27) in which the particular position of point  $P(x, y, z, t)$  of the connecting part (40) is acquired.

32. Rapid input device according to Claim 31, characterized in that of at least the two joints (43, 44), one of them permits movements around an axis, while the other one permits movements around two axes, as a result of which, point  $P(x, y, z, t)$  can assume every position within a hemisphere that is clamped on by the sum of the lengths of the lever arms (41, 41').

33. Rapid input device according to one of Claims 31-32, characterized in that electric motors are provided for the joints (43, 44) of the input acquisition unit (20) via which the joints are driven, as a result of which, there is or there results a "force feedback" function.

34. Rapid input device according to one of Claims 1-25, characterized in that the input acquisition unit (20) is present in a manner integrated in the input means (10) and is equipped with at least three accelerometers (29) that are provided to determine the coordinates of point (P).

35. Rapid input device according to one of Claims 1-25, characterized in that the input acquisition unit (20) has a dynamometer (32) that is mounted in a fixed manner in the input surface (22), that the dynamometer (32) has a shaft (33) with guide part (35) attached thereupon, and that a stylus (10) is provided as input means whose tip (11) is moved in the guide part (35), as a result of which, these movements are provided to determine the coordinates of point (P).

36. Rapid input device according to one of Claims 1-25, characterized in that the input acquisition unit (20) has at least one dynamometer (32) that is mounted in a fixed manner on the input surface (22), that at least one dynamometer (32) has a shaft (33) with additional guide part (36) that is attached thereupon, and that at least one finger (10) is provided as input means whose tip rests on the additional guide part (36), as a result of which the movements of at least one finger are provided to determine the coordinates of point (P).

37. Rapid input device according to one of Claims 1-25, characterized in that the input acquisition unit (20) has a dynamometer (32) and at least one key (28) and that, as input means (10), there are provided at least one finger or a finger and an object, preferably a stylus, whereby the movements of the input means (10) are provided to determine the coordinates of at least one point (P).

38. Rapid input device according to one of Claims 35-37, characterized in that the dynamometer (32) is made in the form of a mini-joystick.

39. Rapid input device according to one of Claims 1-26, characterized in that the input acquisition unit has at least two cameras (20, 20', 20''), preferably infrared cameras, and that a finger (10) is provided as input means, whereby the movements of the finger are provided to determine the coordinates of point (P).

40. Rapid input device according to one of Claims 1-25, characterized in that the input acquisition unit (20) has at least three ultrasound receiver modules (39, 39', 39'') and that as input means (10), there is provided an object, preferably a stylus with an integrated ultrasound transmitter module (38), whereby the movements of the input means (10) are provided to determine the coordinates of point (P).
41. Rapid input device according to Claim 25, characterized in that the object, preferably a stylus, is provided for the guidance of hand, arm, mouth or foot.
42. Rapid input device according to one of Claims 1-23, characterized in that at least one point (P) displays coordinates (x, y, t).
43. Rapid input device according to one of Claims 1-23, characterized in that the input means (10) is at least an eye, whereby the latter's pupil defines the point P(x, y, t).
44. Use of the rapid input device according to one of Claims 1-43 for a writing unit, in particular, a rapid writing unit.
45. Use of the rapid input device according to one of Claims 1-43 in rehabilitation.
46. Use of the rapid input device according to one of Claims 1-43 for computer work.
47. Use of the rapid input device according to one of Claims 1-43 as part of an electronic musical instrument.
48. Use of the rapid input device according to one of Claims 1-43 as part of an electronic drawing unit.
49. Use of the rapid input device according to one of Claims 1-43 as universal input device.
50. Process for the operation of a rapid input device according to one of Claims 1-43, characterized in that coordinates of at least one point (P) are generated with at least one input means (10) in at least one input acquisition unit (20), that the coordinates are converted into electrical signals in input acquisition unit (20), that at least one data quantity (M) is formed

by the electrical signals over the passage of time, which [quantity] is transmitted to computer (30) in a wireless manner or via a cable connection, and that the data quantity (M) is processed in computer (30) with the data processing means and is kept available for output means.

51. Process according to Claim 50, characterized in that with an object, preferably a stylus, or with at least one finger as input means (10), the input takes place via at least one key (28), via at least one dynamometer (32), via at least three protractors, via at least three accelerometers (29), via a touch-sensitive input surface (22) and/or via at least one ultrasound transmitter module (38), whereby coordinates of at least one point (P) are generated in at least input acquisition unit (20).

52. Process according to Claim 50, characterized in that the position of the pupils (12, 12') is acquired by one or two cameras (20, 20') as input acquisition unit in the form of an image using one eye or both eyes (10, 10') as input means, whereby coordinates of at least one point (P) are generated in at least one camera (20, 20') or in the computer (30).